

DETAILED ACTION

It is noted that the preliminary amendment of 4/10/2006 is non in compliance with because it does not include status identifiers on the amended claims. In order to alleviate any possible confusion, the claims examined are included in the marked up copy of claims which begin with "The combinatorial chemistry process..." In subsequent amendments or responses, please include status identifiers with the claims, for example, previously presented, currently amended, cancelled, original, et cetera.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "that mask". There is insufficient antecedent basis for this limitation in the claim.

The limitations in claims 2 and 3 attempt to define a further plane including the source, target and substrate by referencing Figure 2 of the instant application and using corresponding reference numbers from the Figure. However, this manner of describing the plane is indefinite as it defines the plane only using the reference numbers.

According to MPEP 608.01(m):

“Reference characters corresponding to elements recited in the detailed description and the drawings may be used in conjunction with the recitation of the same element or group of elements in the claims. The reference characters, however, should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. The use of reference characters is to be considered as having no effect on the scope of the claims.”

Therefore, reference characters may be used only as extra information in conjunction with a description, and not as a description in themselves as they have no effect on the scope of the claims. It is noted that the language in claim 1 is proper for describing plane in between the target and the substrate.

In addition, claim 2 recites the limitation "the further plane". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Abe et al. (US 4776938).

As to claim 1, Abe et al. teaches a combinatorial chemistry process (Abe et al. meets the definition of a combinatorial chemistry process as given on page 1 of the

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instant specification by meeting the claim limitations below) in which a material is vaporized from two sources and deposited on a single substrate (see Figure 1, reference number 14 is two sources, and reference number 11 is a single substrate, a disk), the path of the vaporized material from each source to the substrate being partially interrupted by an associated mask (Figure 1, reference number 13), the positioning of the mask in a plane parallel to the plane defined by the substrate such that the material is deposited on the substrate in a thickness which increases substantially continuously in a direction along the substrate (the coating thickness increases circumferentially across the disk substrate in column 2 lines 13-41, for example). Abe et al. defines a further plane as described in the claim where it is defined by the center of the source associated with a mask, the substrate and an intersecting edge of the mask so that the mask is positioned that its intersection of the surface of the source with the further plane and the lines in the further plane joining each edge of the source with the opposite edge of the substrate (see Figure 1 – the plane lines are drawn out for illustration purposes and show just this configuration, the source coats the opposite side of the substrate). Abe et al. additionally teaches that the mask is closer to the source than the substrate in, for example, column 4 lines 30-40 (the mask is 40 mm away from the substrate but 36 mm away from the source in this case). Abe et al. also teaches that the mask is movable as broadly as it is claimed, because at some point it may be either attached to or moved out of the vacuum chamber either during assembly or cleaning.

As to claims 2 and 3, even though they are indefinite, Abe et al. teaches their limitations as discussed above. Of particular note is the similarity of the further plane as defined by Abe et al. in Figure 1 and the further plane as defined by the instant specification in Figure 2.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Barkley (US 2676114).

As to claim 1, Barkley teaches a combinatorial chemistry process (Barkley meets the definition of a combinatorial chemistry process as given on page 1 of the instant specification by meeting the claim limitations below) in which a material is vaporized from at least two sources and deposited on a single substrate (see Figure 5, reference numbers 51, 52 etc. are the sources, and reference number 45 is a single substrate), the path of the vaporized material from each source to the substrate being partially interrupted by an associated mask (Figure 5, reference number 50), the positioning of the mask in a plane parallel to the plane defined by the substrate such that the material is deposited on the substrate in a thickness which increases substantially continuously in a direction along the substrate (the coating thickness increases across the substrate as shown in Figures 6, 7, and 9, for example). Barkley defines a further plane as described in the claim where it is defined by the center of the source associated with a mask, the substrate and an intersecting edge of the mask so that the mask is positioned that its intersection of the surface of the source with the further plane and the lines in the further plane joining each edge of the source with the opposite edge of the substrate

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(see Figures 4 and 5, for example – the lines are drawn to illustrate the path of the source vapor and show just this configuration, the source coats the opposite side of the substrate). Barkley additionally teaches that the mask is closer to the source than the substrate as shown in Figures 4 and 5 for example. Barkley also teaches that the mask is movable as broadly as it is claimed, because at some point it may be either attached to or moved out of the vacuum chamber either during assembly or cleaning.

As to claims 2 and 3, even though they are indefinite, Barkley teaches their limitations as discussed above. Of particular note is the similarity of the further plane as shown by Barkley in Figures 4 and 5 and the further plane as defined by the instant specification in Figure 2.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okamoto Hiroaki et al. (US 3520716) and Martin (4469719) show similar configurations of the substrate, mask, and the sources as claimed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELLY GAMBETTA whose telephone number is (571)272-2668. The examiner can normally be reached on Monday - Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kelly M Gambetta/
Examiner
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